REMARKS

In the Office Action, claims 1-2, 7, 9, 11-12, 14-15 and 17 are rejected under 35 U.S.C. §102; and claims 3-6, 8, 10, 13, 16 and 18 are rejected under 35 U.S.C. §103. A petition for a one-month extension of time is submitted herewith. A check in the amount of $120.00 is submitted herewith to cover the cost of the one-month extension. Please charge Deposit Account No. 02-1818 for any insufficiency or credit. Applicants believe that the rejections are improper for at least the reasons below.

Claims 1-2, 7, 9, 11-12, 14-15 and 17 are rejected under 35 U.S.C. §102(b) in view of U.S. Patent No. 5,838,013 to Cox ("Cox"). Of the claims at issue, claims 1 and 11 are the sole independent claims. Claim 1 recites a picture generating apparatus, including at least two image pick-up means, for picking up an image of an object to be imaged, respectively disposed at different positions, correlation detecting means for comparing, with each other, on an epipolar line which is an intersection line of an image pick-up plane of the image pick-up means and a plane determined by a line of sight connecting a virtual position and the object to be imaged, and a line connecting an optical center of the virtual position and an optical center of a detection camera, respective picture data generated by the respective image pick-up means to detect correlation therebetween, and distance picture generating means for generating distance picture indicating distance between a virtual position and the object to be imaged on the basis of the correlation detected by the correlation detecting means.

Claim 11 recites a picture generating method. The method includes picking up an image of an object to be imaged by at least two image pick-up means respectively disposed at different positions to generate picture data, comparing, with each other, on an epipolar line which is an intersection line of an image pick-up plane of the image pick-up means and a plane determined by a line of sight connecting a virtual position and the object to be imaged, and a line connecting an optical center of the virtual position and an optical center of a detection camera, respective picture data generated by the respective image pick-up means to detect correlation therebetween, and generating distance picture indicating distance between virtual position and the object to be imaged on the basis of the detected correlation therebetween.

Cox generally provides an imaging system including two cameras spaced apart a distance so as to provide distance information from an object to be imaged. Cox primarily focuses on a

novel stereo algorithm for finding a match between corresponding features in the left and right images. The algorithm derives the desired distance of the features from the disparities and the separation of the two cameras and depends on minimizing a global cost function that uses a Bayesian sensor fusion approach. See, Cox, col. 3, lines 1-26. Although Cox provides many details of this particular algorithm, the physical configuration of the imaging system is distinguishable from the claimed invention. Cox provides a method of determining epipolar lines as follows: "[f]or each point A in the scene, there exists an epipolar plane that passes through said point and the line joining to centers of the two camera lenses. This plane intersects the image planes of the two cameras to form two corresponding epipolar lines, one in each image." See, Cox, col. 1, lines 50-55.

Cox does not teach or suggest using a virtual position, or for that matter using a line of sight connecting the virtual position to the object to be imaged and a line connecting an optical center of the virtual position and an optical center of a detection camera to form a plane, where the plane intersects the image pick-up plane of an image pick-up means, as required by the claimed invention. In Cox, the epipolar plane is based on a line and a point (i.e., point A and the line joining the centers of the two detection cameras), whereas the claimed invention bases the epipolar plane on two intersecting lines (i.e., a line of sight connecting a virtual position and the object and a line connecting the optical center of the virtual position and the center of the detection camera, where the line of sight of the virtual position invariably passes through the optical center of the virtual position). Cox simply does not provide that an epipolar line is derived from a virtual position. Therefore, Cox does not teach or suggest each and every element of claims 1-2, 7, 9, 11-12, 14-15 and 17. Accordingly, Applicants submit that the anticipation rejection should be withdrawn.

In the Office Action, claims 3-4, 6, 8, 10, 13, 16 and 18 are rejected under 35 U.S.C. §103(a) in view of Cox and in further view of Applicant's admitted prior art. Each of these claims are ultimately dependent on either claim 1 or claim 11. Applicants respectfully submit that any discussions of prior art in the specification do not cure the deficiencies of Cox, as discussed above. Specifically, the Patent Office relies on the following purported admissions of prior art: (a) that it is generally known to use a virtual camera disposed at a virtual position and in a virtual direction to generate a distance picture; and (b) that a variable density picture may be

generated using luminance information. Assuming, arguendo, that Applicant has made these admissions, they still do not cure the deficiencies of Cox with regard to the independent claims. In particular, Cox combined with any purported admissions of prior art do not teach or suggest a picture generating apparatus or method including, at least in part, a correlation detecting means using a line of sight connecting the virtual position to the object to be imaged and a line connecting an optical center of the virtual position and an optical center of a detection camera to form a plane, where the plane intersects the image pick-up plane of an image pick-up means, as required by the claimed invention. Accordingly, Applicants submit that the obviousness rejection of claims 3-4, 6, 8, 10, 13, 16 and 18 should be withdrawn.

In the Office Action, claim 5 was rejected under 35 U.S.C. §103(a) in view of Cox in view of Applicants' admitted prior art and further in view of U.S. Patent No. 5,667,474 to Nishimura ("Nishimura"). The Patent Office primarily relies on Nishimura for the purported teaching of a light emitting means for irradiating pattern light of a predetermined area on the object to be imaged and a filter for shielding pattern light of the area incident to the reference camera. Therefore, Nishimura does not cure the deficiencies of Cox and any admitted prior art as alleged, as discussed above. Accordingly Applicants request withdrawal of the obviousness rejection with respect to claim 5.

For the foregoing reasons, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit reconsideration of same.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY _____

Thomas C. Basso
Reg. No. 46,541
Customer No. 29175

Dated: August 8, 2005